

IUBMB Enzyme Nomenclature

EC 4.2.1.30

Common name: glycerol dehydratase

Reaction: glycerol = 3-hydroxypropanal + H₂O

Other name(s): glycerol dehydrase

Systematic name: glycerol hydro-lyase

Comments: Requires a cobamide coenzyme.

Links to other databases: [BRENDA](#), [EXPASY](#), [KEGG](#), [WIT](#), CAS registry number: 9077-68-3

References:

1. Forage, R.G. and Foster, M.A. Glycerol fermentation in *Klebsiella pneumoniae*: functions of the coenzyme B₁₂-dependent glycerol and diol dehydratases. *J. Bacteriol.* 149 (1982) 413-419. [Medline UI: [82119943](#)]
2. Schneider, Z., Larsen, E.G., Jacobsen, G., Johnson, B.C. and Pawelkiewicz, J. Purification and properties of glycerol dehydrase. *J. Biol. Chem.* 245 (1970) 3388-3396. [Medline UI: [70293158](#)]
3. Schneider, Z. and Pawelkiewicz, J. The properties of glycerol dehydratase isolated from *Aerobacter aerogenes*, and the properties of the apoenzyme subunits. *Acta Biochim. Pol.* 13 (1966) 311-328. [Medline UI: [67124546](#)]
4. Smiley, K.L. and Sobolov, M. A cobamide-requiring glycerol dehydrase from an acrolein-forming *Lactobacillus*. *Arch. Biochem. Biophys.* 97 (1962) 538-543.

[EC 4.2.1.30 created 1972]

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10/042,320 SEARCH RESULTS/HISTORY

(FILE 'HOME' ENTERED AT 10:45:40 ON 09 DEC 2002)

FILE 'REGISTRY' ENTERED AT 10:46:16 ON 09 DEC 2002

L1 51132 S 1,3-PROPANEDIOL
L2 1 S 1,3-PROPANEDIOL/CN

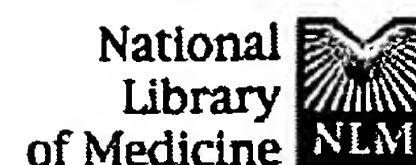
FILE 'MEDLINE, AGRICOLA, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT
10:47:33 ON 09 DEC 2002

FILE 'MEDLINE, AGRICOLA, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT
10:48:46 ON 09 DEC 2002

L3 89227 S PROPANEDIOL OR (PROPYLENE (W) GLYCOL) OR DIHYDROXYPROPANE OR
L4 58 S L3 AND THERMOPHIL?
L5 22 S L4 AND GLYCEROL
L6 14 DUP REM L5 (8 DUPLICATES REMOVED)
L7 332 S GLYCEROL (W) DEHYDRATASE
L8 2 S L7 AND (THERMOPHIL? OR ((HEAT OR TEMPERATURE) (W) RESISTANT)

=>

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	6523	thermophil\$	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2002/12/09 10:30
2	L2	44	l1 and glycerol.ab.	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2002/12/09 10:44
3	L3	5	l1 and (glycerol near5 1,3-propanediol)	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2002/12/09 11:05
4	L4	32	glycerol adj dehydratase	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2002/12/09 11:05
5	L5	7	l4 and (THERMOPHIL\$ OR ((HEAT OR TEMPERATURE) adj RESISTANT))	USPAT; US-PGP UB; EPO; JPO; DERWEN T	2002/12/09 11:06



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- Search History will be lost after one hour of inactivity.
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- Search numbers may not be continuous; all searches are represented.

Search	Most Recent Queries	Time	Result
#22	Related Articles for PubMed (Select 1478463)	11:11:48	<u>117</u>
#20	Search #15 AND temperature	11:10:18	<u>5</u>
#17	Search #15 AND thermophile	11:10:12	<u>0</u>
#18	Search #15 AND heat	11:09:52	<u>1</u>
#16	Search #15 AND thermophilic	11:09:32	<u>0</u>
#15	Search glycerol dehydratase	11:09:14	<u>54</u>
#7	Search #5 AND glycerol	10:12:44	<u>14</u>
#5	Related Articles for PubMed (Select 12148625)	10:10:37	<u>112</u>
#3	Search glycerol and thermophilic and 1,3-propanediol	10:09:39	<u>1</u>
#2	Search glycerol and thermophilic	10:09:22	<u>67</u>
#1	Search glycerol and thermophlic	10:09:22	<u>38767</u>

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i686-pc-linux-gnu Dec 2 2002 12:27:48